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09/217,595	12/22/1998	JARON Z. LANIER	5181-10802	4225

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EXAMINER

TREAT, WILLIAM M

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2181

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/217,595

Filing Date: 9/23/1998

Appellant(s): LANIER ET AL.

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Robert C. Kowert  
For Appellant

**SUPPLEMENTAL  
EXAMINER'S ANSWER**

Pursuant to the remand under 37 CFR 41.50(a)(1) by the Board of Patent Appeals and Interferences on 8/1/2003 **for further consideration of a rejection**, a supplemental Examiner's Answer under 37 CFR 41.50(a)(2) is set forth below:

The following ground(s) of rejection are applicable to the appealed claims:

Claims 31-94 are rejected under 35 U.S.C. 251 as being an improper recapture of broadened claimed subject matter surrendered in the application for the patent upon which the present reissue is based. See *Pannu v. Storz Instruments Inc.*, 258 F.3d 1366, 59 USPQ2d 1597 (Fed. Cir. 2001); *Hester Industries, Inc. v. Stein, Inc.*, 142 F.3d 1472, 46 USPQ2d 1641 (Fed. Cir. 1998); *In re Clement*, 131 F.3d 1464, 45 USPQ2d 1161 (Fed. Cir. 1997); *Ball Corp. v. United States*, 729 F.2d 1429, 1436, 221 USPQ 289, 295 (Fed. Cir. 1984). A broadening aspect is present in the reissue which was not present in the application for patent. The record of the application for the patent shows that the broadening aspect (in the reissue) relates to claim subject matter that applicant previously surrendered during the prosecution of the application. Accordingly, the narrow scope of the claims in the patent was not an error within the meaning of 35 U.S.C. 251, and the broader scope of claim subject matter surrendered in the application for the patent cannot be recaptured by the filing of the present reissue application.

A. As set forth in the following analysis, a recapture rejection of claims 31-94 is appropriate in the present reissue application.

B. In the original application for patent (application no. 07/535,253) claims 1-26 were originally presented for examination and rejected on art, Applicant then filed a File-

Wrapper-Continuation (FWC) application (application no. 08/133,802, which issued as patent no. 5,588,139), in which claims 27-30 were added. Claims 1-30 were then rejected in paper no. 14, mailed 11/8/1995 based on art. On 2/9/1996 the examiner conducted a personal interview with applicants' representative and discussed proposed new claims to be enabled by addition to the specification of material supported by the program code in the appendix filed with the specification but which had not been elaborated on earlier. In applicant's response to the rejection (paper no. 1, filed 3/8/1996):

Independent claims 1 and 26 were amended to include limitations to:

- (a) "creating a first cursor in the computer database",
- (b) "the first cursor including plural first cursor nodes"
- (c) "the first body emulating means including a first point hierarchy ... the first point hierarchy for controlling a shape and orientation of the first cursor and for attaching each of the plural first cursor nodes hierarchically with at least one other of the first cursor nodes",
- (d) "the first body emulating means including ... a first data flow network ... the first data flow network for controlling motion of the first cursor and the first data flow network including a first connection of first input units, first function units and first output units",
- (e) "the first input units receiving the physical status of the first body part",

- (f) "each first function unit including at least one input and at least one output and calculating, based on the at least one input, a value for each of the at least one output",
- (g) "the first output units for producing position and orientation values for a portion of the plural first cursor nodes",
- (h) "creating a second cursor in the computer database",
- (i) "the second cursor including plural second cursor nodes"
- (j) "the second body emulating means including a second point hierarchy ... the second point hierarchy for controlling a shape and orientation of the second cursor and for attaching each of the plural second cursor nodes hierarchically with at least one other of the second cursor nodes",
- (k) "the second body emulating means including ... a second data flow network ... the second data flow network for controlling motion of the second cursor and the second data flow network including a second connection of second input units, second function units and second output units",
- (l) "the second input units receiving the physical status of the second body part",
- (m) "each second function unit including at least one input and at least one output and calculating, based on the at least one input, a value for each of the at least one output", and

(n) "the second output units for producing position and orientation values for a portion of the plural second cursor nodes".

Independent claim 30 was amended to include limitations to:

(o) "constructing virtual objects within the virtual environment using a point hierarchy",

(p) "constructing virtual objects within the virtual environment using ... a data flow network for controlling motion of nodes of the virtual objects",

(q) "the step of constructing includes attaching each node of the virtual objects hierarchically with at least one other of the nodes to form the point hierarchy, each of the nodes of the virtual objects having a position and orientation",

(r) "the step of constructing includes ... building the dataflow network as an interconnection of input units, function units and output units",

(s) "input units receive data from sensors and output the received data to at least one of said function units",

(t) "each of said function units includes at least one input and at least one output, each function unit generating a value for the at least one output based on at least one of data received from at least one of the input units and data received from at least one other of said function units",

(u) "the output units generate the position and orientation of a portion of the nodes of the virtual objects",

- (v) "modifying, by using the data flow network, the position and the orientation of the nodes of the virtual objects based on the position and orientation data,"
- (w) "at least two users",
- (x) "redefining positions and orientations of the nodes of the virtual objects if the virtual environment has been modified".

Claims 1-30 were subsequently allowed, and issued as patent no. 5,588,139 on 12/24/96. The present reissue application (application no. 09/217,595) was then filed on 12/22/98.

Given the above, for the purpose of recapture determination in the reissue application, the following limitations were added to all the independent claims that resulted in a patent, and were therefore relied upon to define over the prior art, and are considered "surrender-generating limitations", i.e., limitations (or equivalents) whose omission in their entirety would result in a reissue claim being directed to surrendered claim subject matter, and barred by the recapture rule:

In relation to independent claims 1 and 26:

- Limitation A: "creating a first cursor in the computer database",
- Limitation B: "the first cursor including plural first cursor nodes"
- Limitation C: "the first body emulating means including a first point hierarchy ... the first point hierarchy for controlling a shape and orientation of the first cursor and for attaching each of the plural first cursor nodes hierarchically with at least one other of the first cursor nodes",

Limitation D: "the first body emulating means including ... a first data flow network ... the first data flow network for controlling motion of the first cursor and the first data flow network including a first connection of first input units, first function units and first output units",

Limitation E: "the first input units receiving the physical status of the first body part",

Limitation F: "each first function unit including at least one input and at least one output and calculating, based on the at least one input, a value for each of the at least one output",

Limitation G: "the first output units for producing position and orientation values for a portion of the plural first cursor nodes",

Limitation H: "creating a second cursor in the computer database",

Limitation I: "the second cursor including plural second cursor nodes"

Limitation J: "the second body emulating means including a second point hierarchy ... the second point hierarchy for controlling a shape and orientation of the second cursor and for attaching each of the plural second cursor nodes hierarchically with at least one other of the second cursor nodes",

Limitation K: "the second body emulating means including ... a second data flow network ... the second data flow network for controlling motion of the second cursor and the second data flow network including a second



connection of second input units, second function units and second output units”,

Limitation L: “the second input units receiving the physical status of the second body part”,

Limitation M: “each second function unit including at least one input and at least one output and calculating, based on the at least one input, a value for each of the at least one output”, and

Limitation N: “the second output units for producing position and orientation values for a portion of the plural second cursor nodes”.

In relation to claim 30:

Limitation O: “constructing virtual objects within the virtual environment using a point hierarchy”,

Limitation P: “constructing virtual objects within the virtual environment using ... a data flow network for controlling motion of nodes of the virtual objects”,

Limitation Q: “the step of constructing includes attaching each node of the virtual objects hierarchically with at least one other of the nodes to form the point hierarchy, each of the nodes of the virtual objects having a position and orientation”,

Limitation R: “the step of constructing includes ... building the dataflow network as an interconnection of input units, function units and output units”,

Limitation S: "input units receive data from sensors and output the received data to at least one of said function units",

Limitation T: "each of said function units includes at least one input and at least one output, each function unit generating a value for the at least one output based on at least one of data received from at least one of the input units and data received from at least one other of said function units",

Limitation U: "the output units generate the position and orientation of a portion of the nodes of the virtual objects",

Limitation V: "modifying, by using the data flow network, the position and the orientation of the nodes of the virtual objects based on the position and orientation data,"

Limitation W: "at least two users",

Limitation X: "redefining positions and orientations of the nodes of the virtual objects if the virtual environment has been modified".

C. The following is a breakdown of claims 31-94 in the reissue application with regard to the issue of recapture, and an analysis of that breakdown:

Claim 31 and its dependent claims 32-45 and 47-65 **do not** contain any surrender-generating (relied-on) limitations or equivalents to:

Limitations D, E, F, G, K, L, M, and N of claims 1 and 26 and Limitations O, P, Q, R, S, T, U, V, W, and X of claim 30.

Claim 46, which depends from independent claim 31 and its dependent claim 45, does contain additional surrender-generating (relied on) limitations or equivalents in

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relation to independent claim 31, but still **does not** contain any surrender-generating (relied on) limitations or equivalents to:

Limitations E, F, G, L, M, and N of claims 1 and 26 and Limitations O, Q, R, S, T, U, V, W, and X of claim 30;

Claim 66 and its dependent claims 67-71 **do not** contain any surrender-generating (relied-on) limitations or equivalents to:

Limitations D, E, F, G, K, L, M, and N of claims 1 and 26 and Limitations O, P, Q, R, S, T, U, V, W, and X of claim 30.

Claim 72 and its dependent claims 73-76 **do not** contain any surrender-generating (relied-on) limitations or equivalents to:

Limitations D, E, F, G, K, L, M, and N of claims 1 and 26 and Limitations O, P, Q, R, S, T, U, V, W, and X of claim 30.

Claim 77 and its dependent claims 78-89 **do not** contain any surrender-generating (relied-on) limitations or equivalents to:

Limitations D, E, F, G, K, L, M, and N of claims 1 and 26 and Limitations O, P, Q, R, S, T, U, V, W, and X of claim 30.

Claim 90 and its dependent claim 91 **do not** contain any surrender-generating (relied on) limitations or equivalents to:

Limitations A, D, F, G, H, I, J, K, L, M, N of claims 1 and 26 and Limitations O, Q, S, V, W, and X of claim 30.

Claims 92 and 93, which depend from independent claim 90, do contain additional surrender-generating (relied on) limitations or equivalents in relation to

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independent claim 90, but still **do not** contain any surrender-generating (relied on) limitations or equivalents to:

Limitations A, D, F, G, H, K, M, N of claims 1 and 26 and Limitations O, Q, S, V, and X of claim 30.

Claim 94 does not contain any surrender-generating (relied on) limitations or equivalents to:

Limitations A, D, F, G, and H of claims 1 and 26 and Limitation W of claim 30.

Claims 31-94 do not contain at least one, or a portion of at least one, of the twenty-four above-noted surrender-generating limitations A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X. Nor do these claims contain any broadened versions of, or substantially equivalent substitutes for, the omitted surrender-generating (relied-on) limitations. And while some of applicants' dependent claims do contain newly added, narrowing limitations, the limitations are not in the area of the surrender. Therefore, claims 31-94 are narrower, in some instances, than the original patent claims in an aspect not germane to what was surrendered in response to a prior art rejection, but **the claims are broader than the original patent claims in an aspect germane to what was surrendered in response to a prior art rejection.** Pursuant to *In re Clement*, 131 F.3d 1464, 45 USPQ2d 1161 (Fed. Cir. 1997), if a reissue claim is broader in an aspect germane to what was surrendered in response to a prior art rejection, but narrower in another aspect completely unrelated to what was surrendered, the recapture rule bars the claim. This is the understanding of how the shorthand set forth in *Clement*, 131 F.3d at 1470, 45 USPQ2d at 1165 for the broadening/narrowing

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scenario 3(a), is applied in light of *Hester Industries, Inc. v. Stein, Inc.*, 142 F.3d 1472, 46 USPQ2d 1641 (Fed. Cir. 1998) and *Pannu v. Storz Instruments, Inc.*, 258 F.3d 1366, 59 USPQ2d 1597 (Fed. Cir. 2001), both of which pointed out that one should look at the limitation relied upon to define the invention over the prior art, and determine if that limitation is omitted in the reissue claims. Note also the statement in *Clement* that every time the claims are narrowed by amendment, subject matter is surrendered. *Clement*, 131 F.3d at 1471, 45 USPQ2d at 1166 ("Every time Clement amended his claims, he intentionally omitted or abandoned the claimed subject matter."). (This statement that every time the claims are narrowed by amendment, subject matter is surrendered, calls for analyzing reissue claims for whether a key narrowing that was made in the original prosecution has abandoned, i.e., surrendered, subject matter that the patent owner is now seeking to recapture by reissue. Thus the insertion of a narrowing unrelated to the abandoned (surrendered) claim subject matter that owner is impermissibly trying to recover does not save the claim from the recapture doctrine.)

In the present instance, similar to the facts in *Pannu*, the applicant has broadened the reissue claims 31-94 in a key aspect germane to what was surrendered in response to the prior art rejection, and applicant has not narrowed those claims in the same area -- but rather in a different area. Therefore, the decision in *Pannu* is relevant to the issues on appeal because it provides an actual fact situation in which this scenario, where there was narrowing in a different area, was held to be recapture. The decision of *Eggert*, Appeal No. 2001-0790 (Bd. Pat. App. & Inter., decided May 29, 2003) (precedential opinion of an expanded panel of the Board) on the other hand is not

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on point as to the issues at hand with respect to claims 31-94. In *Eggert* the surrender-generating limitation (i.e, the limitation relied upon to define the invention over the prior art) was not omitted in its entirety but rather was broadened. Accordingly, the Board found the claims to escape the recapture doctrine. In the present instance, the surrender-generating (relied-on) limitations were omitted in their entirety and therefore the claims do not escape the recapture doctrine.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



William M. Treat

**WILLIAM M. TREAT**  
**PRIMARY EXAMINER**

The appellant must within **TWO MONTHS** from the date of the supplemental examiner's answer exercise one of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the rejection for which the Board has remanded the proceeding:

(1) **Reopen prosecution.** Request that prosecution be reopened before the examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit, or other evidence. Any amendment, affidavit, or other evidence must be relevant to the issues set forth in the remand or raised in the supplemental examiner's answer. Any request that prosecution be reopened will be treated as a request to withdraw the appeal. See 37 CFR 41.50(a)(2)(i).

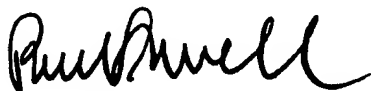
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(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. If such a reply brief is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened under 37 CFR 41.50(a)(2)(i). See 37 CFR 41.50(a)(2)(ii).

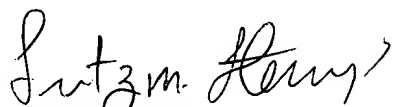
Extensions of time under 37 CFR 1.136(a) are not applicable to the **TWO MONTH** time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

A Technology Center Director or designee has approved this supplemental examiner's answer by signing below:

*APPROVED*



PAUL SEWELL  
ACTING DIRECTOR



FRITZ FLEMING  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100  
10/6/2006